ABSTRACT

A method and apparatus are disclosed for congestion management in a multi-branch Internet Protocol (IP)-based private branch exchange (PBX) switch. The multi-branch IP-based PBX switch is interconnected through (i) a packet network referred to as the primary network, such as a wide area network (WAN), and (ii) an alternate network, such as the public switched telephone network (PSTN),. Packet phone adapters (PPAs) associated with each packet telephone unit monitor packet telephone calls and report delay information to communication servers. The communication server can reroute the packet telephony calls through the secondary network upon detection of congestion in the underlying primary network, thereby preserving voice quality. The packet phone adapter (PPA) will discard records collected from calls whose duration is below a minimum value, to ensure reliable congestion information. Each communication server records reported voice quality of service information in a congestion control database. An overload control process processes each call set up request and determines if the requested path is congested. If a requested path is congested, then the overload control process may forward the call using the secondary network.

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